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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/521,864	01/21/2005	Alexis S. R. Ashley	GB 020118	1254
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EXAMINER SCHWARTZ, DARREN B				
ART UNIT 2435		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/521,864

Applicant(s)

ASHLEY ET AL.

Examiner

DARREN SCHWARTZ

Art Unit

2435

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SF/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-15 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 9, 10 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over et al (U.S. Pat Pub 2002/0106086 A1), hereinafter referred to as Kamiya, in view of Graunke (U.S. Pat Pub 2003/0002675 A1), hereinafter referred to as Graunke, in further view of Gehring (U.S. Pat Pub 2002/0116606 A1), hereinafter referred to as Gehring.

Re claims 1 and 9: Kamiya teaches a method of storing a received digital signal which has been encrypted by an encryption key (CW) [key A] and transmitted in encrypted form (Fig 4, elts: 11, 12, 13, 14, 31 and 33), comprising the steps of:

decrypting the signal by a decryption module [Fig 4, elt 35A] using a decryption key (CW) [Fig 4, elt A→18 & 19 →A1 & A2 →35B→35A] corresponding to the encryption key (¶125);

transmitting the decrypted signal along a first data path (Fig 4: elts 35A→35C→35D);

receiving the decrypted signal by a processor positioned along the first data path and processing the decrypted signal, by the processor (Fig 4: elts 35A→35C→35D→34; Note elt 34 contains elt 35B, referred to as "SIGNAL PROCESSING UNIT");

forwarding the encryption key corresponding to the decryption key (CW) along a second data path independent of the first data path (Fig 4: elts A2, 19, 32, 35B; ¶118: *"...and supplies the remaining passkeys, namely the passkey A2, to the write unit 19 for delivery on a storage medium"*; Abstract: *"Physically different media or transmission over a network at different times are unit to transmit the different sets of key information separately"*).

However, Graunke teaches converging the first and second data paths at an encryption module (Fig 2, elts 31, 13, 15 & 32: ¶22); storing the re-encrypted signal (Fig 2, elts 33 & 27; Abstract, line 10; ¶27, right column, lines 9-10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Kamiya with the teachings of Graunke, for the purpose of preventing theft of the ciphering keys, as taught by Graunke (¶19).

While Graunke teaches re-encrypting the processed signal using a key K2 different from the original encryption/decryption key K1, Gehring explicitly teaches re-encrypting the processed signal using the encryption key (Fig 5; page 5: claims 9c, 11b and 13).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Kamiya and Graunke with the

teachings of Gehring, for the purpose of providing symmetric encryption with all nodes along with the same key. It is known in the art that symmetric encryption provides expeditious security.

Re claims 2 and 10: The combination of Kamiya, Graunke and Gehring teaches the step of processing the decrypted signal includes manipulating it to improve storage and/or playback operation (Kamiya: ¶¶137- ¶¶138; ¶¶143).

Re claim 3: The combination of Kamiya, Graunke and Gehring teaches the decryption key (CW) is the same as the encryption key (CW) (Kamiya: Fig 4, elts A, 13, 14, 31, 35, 35A & 35B: ¶¶125; Gehring: Fig 5).

Re claim 4: The combination of Kamiya, Graunke and Gehring teaches the encryption key is one of a plurality of keys forming a key stream (Kamiya: ¶¶13; ¶¶132).

Re claim 15: The combination of Kamiya, Graunke and Gehring teaches the steps are performed within a digital signal storage device (Kamiya: Fig 1, all elts; Graunke: ¶¶35 and ¶¶44).

3. Claims 5-8 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over et al (U.S. Pat Pub 2002/0106086 A1), hereinafter referred to as Kamiya, Graunke (U.S. Pat Pub 2003/0002675 A1), hereinafter referred to as Graunke and Gehring (U.S. Pat Pub 2002/0116606 A1), hereinafter referred to as Gehring, in further view of Relander et al (U.S. Pat Pub 2002/0066012 A1), hereinafter referred to as Relander.

Re claim 5: The combination of Kamiya, Graunke and Gehring teaches all the limitations of claim 4 as previously discussed.

Relander explicitly teaches delaying the key stream along the second data path after decrypting the signal and before re-encrypting the processed signal (Relander: ¶8: lines 7-12; page 6, claims 2 and 7).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Kamiya, Graunke and Gehring with the teachings of Relander, for the purpose of synching the key and data streams. The Examiner note Kamiya teaches the convergence of the passkeys and content wherein the passkeys are delivered by a computer readable medium and the contents are delivered by a transmission medium (Kamiya: Fig 4: elts 19, 32, 35B, 35A; ¶141-¶142).

Re claim 6: The combination of Kamiya, Graunke, Gehring and Relander teaches delaying the key stream in dependence on the processing being carried out on the decrypted signal (Relander: ¶6-¶7; page 6, claims 2 and 7).

Re claim 7: The combination of Kamiya, Graunke, Gehring and Relander teaches the digital signal comprises a stream of transport packets (Relander: ¶8).

Re claim 8: The combination of Kamiya, Graunke, Gehring and Relander teaches the step of processing the decrypted signal, wherein performing the operations of Packet Identification Number (PID) remapping, remultiplexing or transcoding (Relander: ¶10).

Re claim 11: The combination of Kamiya, Graunke and Gehring teaches all the limitations of claim 10 as previously discussed.

Relander explicitly teaches the step of processing the decrypted signal, wherein performing the operations of Packet Identification Number (PID) remapping, remultiplexing or transcoding (¶10).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the teachings of Kamiya, Graunke and Gehring with the teachings of Relander, for the purpose of synching the key and data streams. The Examiner note Kamiya teaches the convergence of the passkeys and content wherein the passkeys are delivered by a computer readable medium and the contents are delivered by a transmission medium (Kamiya: Fig 4: elts 19, 32, 35B, 35A; ¶141-¶142). Using packet numbering is a well known technique in re-assembling fragmented packets.

Re claim 12: The combination of Kamiya, Graunke, Gehring and Relander teaches the decryption key (CW) is the same as the encryption key (CW) (Kamiya: Fig 4, elts A, 13, 14, 31, 35, 35A & 35B: ¶125; Gehring: Fig 5).

Re claim 13: The combination of Kamiya, Graunke, Gehring and Relander teaches the encryption key is one of a plurality of keys forming a key stream (Kamiya: ¶13; ¶132).

Re claim 14: The combination of Kamiya, Graunke, Gehring and Relander teaches delaying means positioned along the second data path for delaying the key stream prior to re-encrypting the decrypted signal (Relander: ¶8: lines 7-12; page 6, claims 2 and 7).

Conclusion

Examiner's Note: Examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the text of the passage taught by the prior art or disclosed by the examiner.

In the case of amending the claimed invention, Applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DARREN SCHWARTZ whose telephone number is (571)270-3850. The examiner can normally be reached on 8am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Vu can be reached on (571)272-3859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. S./
Examiner, Art Unit 2435
/Kimyen Vu/
Supervisory Patent Examiner, Art Unit 2435